ELSEVIER

Volume 179, Issues 1–3, 20 October 2006

Journal of Materials Processing Technology

www.elsevier.com/locate/jmatprotec

Contents

3rd Brazilian congress of manufacturing engineering. 3rd COBEF – 2005 1
J.D. Bressan

Photograph of some of the delegates at the third COBEF Conference at Joinville, Brazil, 2005 4

Aspects of tube and pipe manufacturing processes: Meter to nanometer diameter 5
M.S.J. Hashmi

Carbon structures in silicon carbide derived carbon 11
S. Welz, M.J. McNallan, Y. Gogotsi

Metal Forming & Shaping

Construction and validation tests of a torsion test machine 23
J.D. Bressan, R.K. Unfer

Analyses of residual stresses on stamped valves by X-ray diffraction and finite elements method 30
J.A. Martins, L.P. Cardoso, J.A. Fraymann, S.T. Button

A new yield function for porous materials 36
L.M.M. Alves, P.A.F. Martins, J.M.C. Rodrigues

A comparative analysis of elasto-plastic constitutive models for porous sintered materials 44
J.G. Justino, M.K. Alves, A.N. Klein, H.A. Al-Qureshi

Effect of anvil geometry on the stretching of cylinders 50
D.I. Buteler, P.C.U. Neves, L.V. Ramos, C.E.R. Santos, R.M. Souza, A. Sinatora

Theorical and experimental determination of the forming limit diagram for the AISI 304 stainless steel 56
H.B. Campos, M.C. Butuc, J.J. Grácio, J.E. Rocha, J.M.F. Duarte

Influence of the yielding criterion on total forming force in metallic junctions using elastomers 61
C.R.M. Foli, M.Â. Menezes, L.A.M. Filho

Numerical simulation of an aluminum alloy tube hydroforming 67
J.P. Abrantes, C.E.C. de Lima, G.F. Batalha

Tribology & Surface Engineering

Study of wear in self-lubricating composites for application in seals of electric motors 74
M. Kawakame, J.D. Bressan

Wear on tool steel AISI M2, D6 and 52100 coated with Al_2O_3 by the MOCVD process 81
J.D. Bressan, G.A. Battiston, R. Gerbasi, D.P. Daros, L.M. Gilapa

Alternative lubrication and lubricants for the cold extrusion of steel parts 87
C. Caminaga, R.L. da Silva Issii, S.T. Button

Metal Cutting

Intervening variables in electrochemical machining 92
J.C. da Silva Neto, E.M. da Silva, M.B. da Silva

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. A leaflet describing our requirements is available from the publisher upon request.

Elsevier B.V.

Temperature determination at the chip–tool interface using an inverse thermal model considering the tool and tool holder 97
S.R. Carvalho, S.M.M. Lima e Silva, A.R. Machado, G. Guimarães

Optimization of titanium cutting by factorial analysis of the pulsed Nd:YAG laser parameters 105
I.A. Almeida, W. de Rossi, M.S.F. Lima, J.R. Berretta, G.E.C. Nogueira, N.U. Wetter, N.D. Vieira Jr.

Influence of cutting conditions scaling in the machining of semiconductors crystals with single point diamond tool 111
R.G. Jasinevicius

Development of a low cost Touch Trigger Probe for CNC Lathes 117
M. Del Guerra, R.T. Coelho

Analysis of temperature during drilling of Ti6Al4V with minimal quantity of lubricant 124
R.P. Zeilmann, W.L. Weingaertner

High-speed finishing milling of industrial graphite electrodes 128
R.B. Schroeter, R. Kratochvil, J. de Oliveira Gomes

Evaluation of high-speed end-milling dynamic stability through audio signal measurements 133
W.L. Weingaertner, R.B. Schroeter, M.L. Polli, J. de Oliveira Gomes

Efficiency of the laser texturing on the adhesion of the coated twist drills 139
D. Neves, A.E. Diniz, M.S.F. de Lima

Hard turning of tempered DIN 100Cr6 steel with coated and no coated CBN inserts 146
G. de Siqueira Galoppi, M.S. Filho, G.F. Batalha

Application of factorial design for studying the burr behaviour during face milling of motor engine blocks 154
L.C. da Silva, A.C.A. de Melo, Á.R. Machado, M.B. da Silva, A.M.S. Júnior

The performance of TiN coated carbide tools when turning AISI 8620 steel 161
R.F. de Ávila, A.M. Abrão, G.C.D. de Godoy

The influence of sulfur on the machinability of gray cast iron FC25 165
A.A. Pereira, L. Boehs, W.L. Guesser

The influence of the manufacturing strategy on the production of molds and dies 172
K. Schützer, A.L. Helleno, S.C. Pereira

Investigation of tool path interpolation on the manufacturing of die and molds with HSC technology 178
A.L. Helleno, K. Schützer

Development of new cutting fluid for grinding process adjusting mechanical performance and environmental impact 185
S.M. Alves, J.F.G. de Oliveira

Casting & Properties & Polymer

Influence of injection parameters on defects formation in die casting Al12Si1,3Cu alloy: Experimental results and numeric simulation 190
G.O. Verran, R.P.K. Mendes, M.A. Rossi

Study of full-mold casting process for Al–Si hipoeuthetic alloys 196
F.G. Martins, C.A.S. de Oliveira

Geometrical effects on lamellar grey cast iron fracture toughness 202
G. Bertolino, J.E. Perez-Ipiña

Polymer melt flow in plane channels: Hydrodynamic and thermal boundary layers 207
P.S.B. Zdanski, M. Vaz Jr.

Improving the ductility-dip cracking resistance of Ni-base alloys 212
A.J. Ramirez, J.W. Sowards, J.C. Lippold

Welding

Emission spectrometry evaluation in arc welding monitoring system 219
S.C.A. Alfaro, D. de S. Mendonça, M.S. Matos

High frequency induction welding simulating on ferritic stainless steels 225
I.J. de Santana, B. Paulo, P.J. Modenesi

Automation of the processes of surface measurement and of deposition by welding for the recovery of rotors of large-scale hydraulic turbines 231
N.G. Bonacorso, A.A. Gonçalves Jr, J.C. Dutra

Porosity variation along multipass underwater wet welds and its influence on mechanical properties 239
E.C.P. Pessoa, A.Q. Bracarense, E.M. Zica, S. Liu, F. Perez-Guerrero

Repair welding of polymer injection molds manufactured in AISI P20 and VP50IM steels 244
W.T. Preciado, C.E.N. Bohorquez

Process planning, manufacturing automation management

WebTurning: Teleoperation of a CNC turning center through the Internet 251
A.J. Álvares, J.C.E. Ferreira

Feature recognition in axisymmetrical parts modeled by solids in an Internet-oriented CAD/CAM system 260
J.C.E. Ferreira, D. Vivian

Manufacturing execution systems for customized production 268
J.M. Simão, P.C. Stadzisz, G. Morel

Analysis of the fall of TPM in companies 276
M. Rodrigues, K. Hatakeyama

Author index 280

Subject index 281